

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 749 909 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
23.07.1997 Bulletin 1997/30

(51) Int Cl.⁶: **B65D 47/34, B05B 11/00**

(43) Date of publication A2:
27.12.1996 Bulletin 1996/52

(21) Application number: **96109967.8**

(22) Date of filing: **20.06.1996**

(84) Designated Contracting States:
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE**

(30) Priority: **22.06.1995 US 493837**

(71) Applicant: **Owens-Brockway Plastic Products
Inc.
Toledo, OH 43666 (US)**

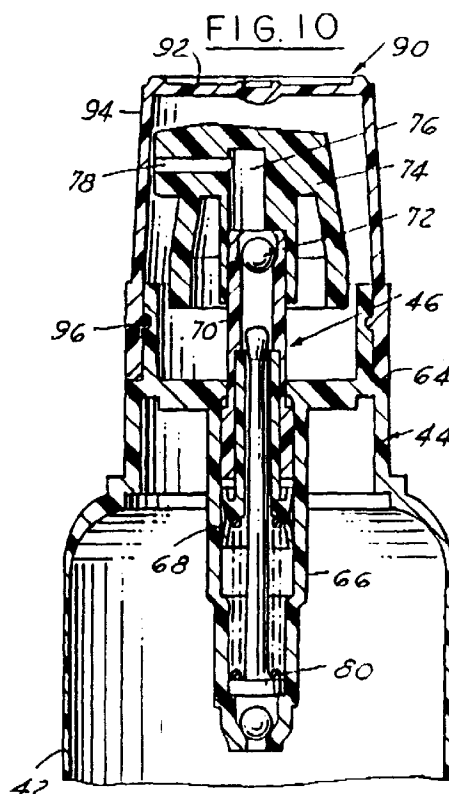
(72) Inventors:
• **Smith, Roger P.
Exeter, NH 03833 (US)**

• **Gearhart, Kent A.
Perrysburg, OH 43551 (US)**
• **Bliss III, Earnest E.
Perrysburg, OH 43551 (US)**

(74) Representative: **Blumbach, Kramer & Partner
Patentanwälte,
Sonnenberger Strasse 100
65193 Wiesbaden (DE)**

(54) Flexible tube with pump dispenser and method of making

(57) A flexible tube and pump dispenser for lotions and the like including a flexible plastic tube (42) having a first end and a second end. The tube (42) includes an integral rigid finish (44,100) at one end which has a radial flange (54,102) and a radially inwardly extending wall (54, 102). The flange (54,102) has an opening (56,104) therethrough. A pump dispenser (46,106) having a plunger and an axial body extends through the opening (56,104) in the sealing flange of the finish. The axial body of the pump dispenser (46,106) has a flange (82) engaging the flange (54,102) of the finish. The flange (82) on the body is held in position engaging the wall on the finish.



EP 0 749 909 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 96 10 9967

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	FR 2 646 408 A (SOFAB) 2 November 1990 * page 4, line 13 - page 5, line 10; figures 3,4 *	1-3,7	B65D47/34 B05B11/00
X	EP 0 582 517 A (SOC TECH DE PULVERISATION S T) 9 February 1994 * column 4, line 31 - column 5, line 9; figures *	1-3,7	
X	EP 0 497 709 A (CONCEPTAIR ANSTALT) 5 August 1992 * column 12, line 26 - line 32 * * column 12, line 58 - column 13, line 7 * * column 16, line 34 - line 40; figures 8,9,19 *	1,7	
X	FR 2 685 224 A (L'OREAL) 25 June 1993 * page 7, line 18 - line 28; figure 6 *	1	
A	FR 2 669 306 A (KERPLAS SNC) 22 May 1992 * figures *	1	
A	DE 27 10 984 A (AERO PUMP GMBH) 21 September 1978 * figure *	9	B05B B65D
A	EP 0 622 311 A (SHINKO KAGAKU KABUSHIKI KAISHA) 2 November 1994 * column 3; figures *	11-13	
A	US 4 434 915 A (KIRK JR DONALD C) 6 March 1984 * column 5, line 41 - line 58; figures *	14	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 21 May 1997	Examiner Brévier, F
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application I : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 150 (01.92) (P04001)